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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,531	07/21/2005	Bertrand Bertin Mourot	263950US0PCT	9646

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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NGUYEN, THONG Q

ART UNIT	PAPER NUMBER
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2872

NOTIFICATION DATE	DELIVERY MODE
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06/13/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/518,531	BERTIN MOUROT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thong Q. Nguyen	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/3/05</u> | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The present Office action is made in response to the Pre-amendment filed on 12/30/2004. It is noted that in the pre-amendment, applicant has amended claims 1-26 and simultaneously added a new set of dependent claims, i.e., claims 27-35, into the application. There is not any claim being canceled. The pending claims 1-35 are examined in this office action.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

3. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features claimed in present claims must be shown: First, the feature related to the arrangement of the diffusing layer having a mineral particle layer and an electromagnetic insulating device as recited in claim 1; Second, the features related to the arrangement of the diffusing layer having a mineral particle layer, an electromagnetic insulating device, and

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a substrate as recited in each of claims 5-7; Third, the feature related to the incorporation of the electromagnetic insulating device and the mineral particle layer as recited in claim 8; Fourth, the feature related to the structure of the mineral particle layer as recited in claim 9; Fifth, the features related to the arrangement of the diffusing layer having a mineral particle layer, an electromagnetic insulating device, and a coating as recited in claim 17; and Sixth, the features related to a light source or a backlighting system or a lamp as recited in each of claims 33-35 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
6. The specification is objected to because it does not have headlines such as background of the invention, Summary of the invention, etc.. for the purpose of providing a clear framework of the specification. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required

"Sequence Listing" is not submitted as an electronic document on compact disc).

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not provide a proper antecedent basis for the feature recited in claim 27. Applicant is respectfully invited to review the specification, in particular, in page 9 which discloses the material of the transparent conducting oxide. Applicant should note that while the specification discloses that the material of the transparent conducting oxide is F:SnO<sub>2</sub> or Sb:SnO<sub>2</sub> or Sn:InO<sub>3</sub> or Al:ZnO; however, the specification does not disclose that the material of the transparent conducting oxide is mixtures of the mentioned materials as claimed.

***Claim Objections***

8. Claims 3, 5-7, 17-18, 20-24 are objected to because of the following informalities.

Appropriate correction is required.

a) In claim 3: on line 3, the feature thereof "said conducting layer" lacks a proper antecedent basis. Applicant should note that the claim recites the feature thereof "the electromagnetic insulating device consists of at least one electrically conducting layer", see lines 2-3 of the claim. Thus, should the feature "said conducting layer" appeared on line 3 of the claim be changed to --said at least one electrically conduct layer--?

b) In claim 5: on line 3, the feature "the conducting layer" lacks a proper antecedent basis. Applicant should note that the mentioned feature is recited in claim 3, not claim 1. Should the claim 5 be amended to depend upon claim 3?

c) Each of claims 6-7 is objected for the similar reason as set forth in element b) above. Should each of claims 6 and 7 be amended to depend upon claim 3?

d) Regarding claim 17, the phrase "particularly a coating...function" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Should the terms "particularly a coating with" of the mentioned feature be changed to --wherein said coating is selected from a group consisting of-- or other suitable technical terms to make clear the feature claimed?

Further, the terms “antifouling function or an antifouling function” (line 4) should be changed to --antifogging function or an antifouling function--. See specification in page 5, lines 4-8, for example.

e) In claim 18: on lines 2-3, the feature thereof “a light transmission  $T_L$  greater than 20% and preferably greater than 50%” is unclear. In other words, it is unclear about the range of the light transmission. Should “and preferably greater than 50%” be deleted? Applicant should note that applicant could draft a dependent claim which depends upon claim 18, to claim the range of light transmission greater than 50%.

f) Claim 20 is misdescriptive of the invention as taught in the specification.

Applicant is respectfully invited to review the specification, in particular, in pages 5 and 12-13, for example, which discloses the formation of the inventive device, i.e., the diffusing layer, on a substrate to form a diffusing substrate. The specification does not teach that the diffusing layer is formed on a diffusing substrate as claimed. (Examiner's emphasis). Should the terms “diffusing substrate” (line 3) be changed to --substrate-- to make the method claimed having support from the specification? Applicant is also reminded that if the claim is amended as suggested then other claims dependent upon the claim 20 should be amended to make them comply with the requirement of 35 USC 112, second paragraph.

g) Each of claims 21 and 23 is objected for the similar reason as set forth in element f) above.



h) Claim 22 is unclear by the recitation thereof "the diffusing substrate is a sheet of glass that comprises the backlight system". How can a substrate can comprises a backlight system which, as understood, comprises a plurality of optical elements including a substrate, at least one light,... Should the term "comprises" be changed to --makes up-- or --constitutes-- or --forms-- or other suitable term(s) to make clear the feature claimed?

i) Claim 24 is objected for the similar reason as set forth in element h) above

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5, 7-11, 14-27, 29-30, 32 and 34, as best as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Jinnai et al (EP 1 083 445).

Jinnai et al disclose a diffuser device. The device as described in pages 11-16 comprises a light scattering sheet laminated over a transparent conductive layer wherein the light scattering layer comprise a transparent resin having particles dispersed therein and the transparent conductive layer has a resistance in the range of 10 to 1000 ohm per square. See sections [0070]-[0072] and [0092]. The diffuser device also comprises the following features: a) The transparent conductive layer is a layer constituted of an electrically conductive inorganic compound which inorganic compound can have transparent or translucent

characteristic. See sections [0090] and [0074]; b) the light scattering sheet is comprises of a light scattering layer and a substrate sheet wherein the transparent conductive layer is deposited on the light scattering layer. See sections [0093] and [0114] and fig. 4; c) the substrate can be glass or polymers. See sections [0054]-[0057] and [0120]; d) the transparent conductive layer can be arranged on one side of a substrate or directly attached to the light scattering layer which is understood as an incorporated manner with the light scattering layer. See section [0093]; e) The light scattering layer is made by a binder of resin such as polycarbonate, see section [0059], and the particles are dispersed in the binder wherein the particles is made by metal oxide such as zirconium oxide. See sections [0072]-[0077]; f) One surface of the light scattering layer could be coated by an antistatic layer or an antifogging layer. See sections [0097]-[0098] and [0094]; g) the light scattering device has a light transmission greater than 50%. See section [0096] and claim 11; h) The light scattering device is used in a liquid crystal system which is understood comprises a light source and other optical elements. See section [0114]; i) the thickness of the transparent conductive layer is in the range of  $100 \times 10^{-8}$  cm to  $2000 \times 10^{-8}$  cm or 0.01 to 0.2 micrometer, see section [0091] and the thickness of the light scattering layer is similar to that of the transparent conductive layer, see section [0099], thus the total thickness of the light scattering layer and the light conductive layer is in the range claimed.

Regarding to the method claimed as recited in present claims 20-26, such method steps are inherently resulted of the device as tight by Jinnai et al because Jinnai et al clearly disclose the use of a liquid crystal system having a backlight system having at least one light source, a liquid crystal cell, filter, light scattering device, polarizer, ... See section [0107] and fig. 4, for example.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 6, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jinnai et al.

The diffuser device as provided by Jinnai et al does not explicitly state that the transparent conductive layer is located between the substrate and the light scattering layer as claimed in present claim 6. However, such an arrangement of the transparent conductive layer with respect to the substrate and the light scattering layer as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification, see page 4 in which applicant has disclosed that the conductive layer is located on one side of a substrate opposite to the light scattering element. It is also noted that the arrangement of the conductive layer is located on one side of a substrate opposite to the light scattering element is

indeed claimed as can be seen in the present claim 7. It is also noted that is was decided in the Courts that a rearrangement of parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the light scattering device as provided by Jinnai et al by rearrangement the light conductive layer with respect to the substrate of the light scattering element including the arrangement of the light conductive layer between the substrate and the light scattering layer for the purpose of adjusting the light distribution for satisfying a particular application.

13. Claims 12-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Jinnai et al in view of Suzuki et al (U.S. Patent No. 6,033,743).

The light scattering device comprises a transparent resin in which particles are dispersed as provided by Jinnai et al does not disclose that the size of the particle is in the range of 50 nm to a micro as claimed in claim 12 and the material of the particle is ITO as claimed in claim 13. However, the use of a light control sheet made by resin having particles dispersed therein in which the particles is made by ITO or ZrO<sub>2</sub> and has its diameter in the range of 3 to 20 nm is known to one skilled in the art as can be seen in the light control sheet provided by Suzuki et al. See column 6, lines 51-57 for the material of the particles and see column 7, lines 1-3 for the dimension of the particles. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the device as provided by Jinnai et al by using a light scattering

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element having particles with small dimension and made by Ito as suggested by Suzuki et al for the purpose of adjusting the light transmission of light passing through the light scattering element.

14. Claims 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jinnai et al in view of Hasegawa (U.S. Patent No. 5,461,279).

Jinnai et al disclose a diffuser device for a backlight. However, They do not clearly state that the diffuser device is used with a lamp. However, the use of a flat lamp having a diffuser device attached thereto is known to one skilled in the art as can be seen in the system provided by Hasegawa. For instance, in column 2 and fig. 5, Hasegawa discloses a flat fluorescent map for use with a liquid crystal device wherein the lamp comprises conductive elements (14) and a diffuser element (22) is attached to the lamp. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize the diffuser device as provided by Jinnai et al by attached it to a lamp as suggested by Hasegawa for the purpose of providing diffusing illumination to the liquid crystal device.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Thong Q. Nguyen', is written over a horizontal line.

Thong Q Nguyen  
Primary Examiner  
Art Unit 2872

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